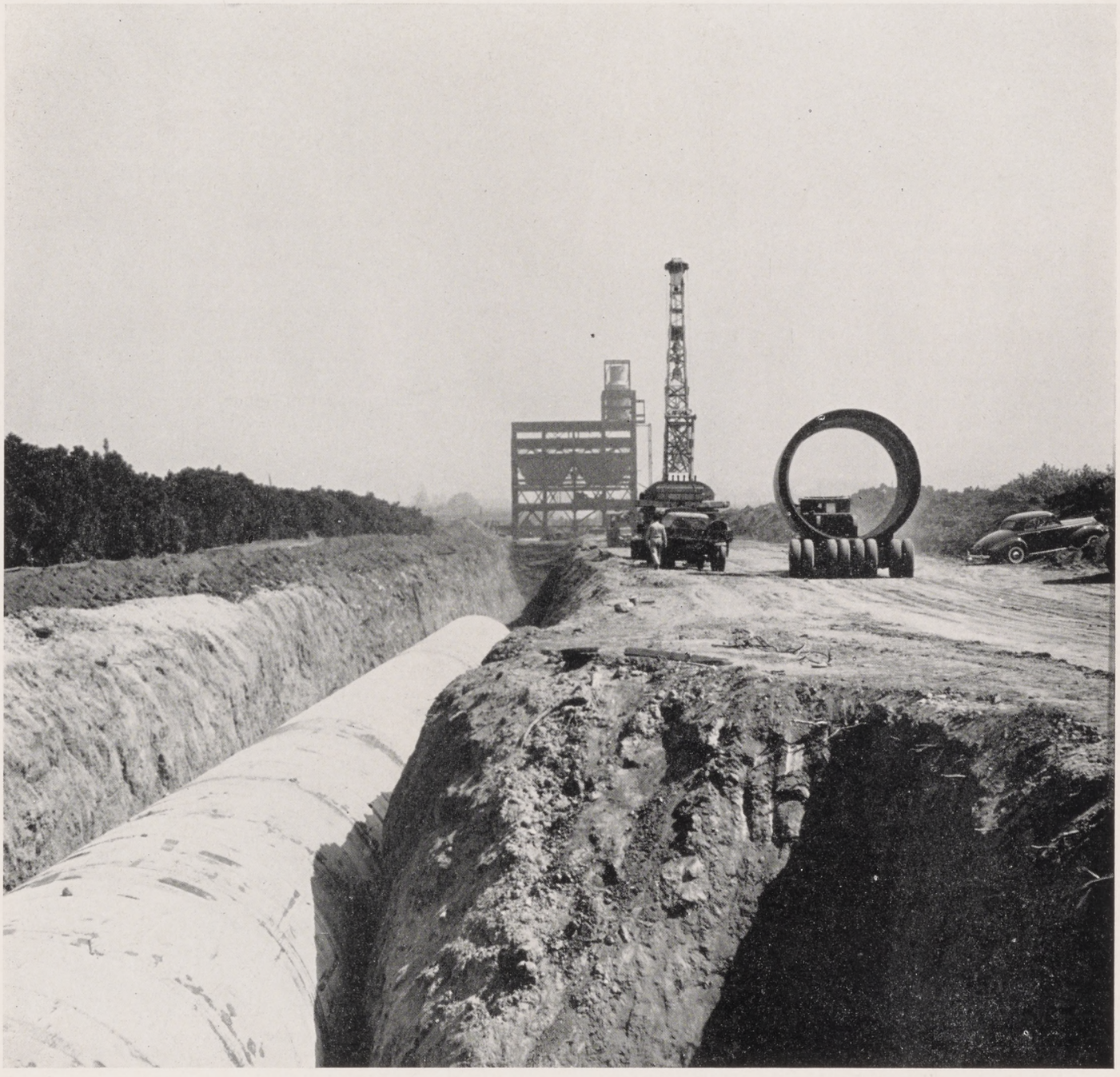
• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. VII. MAY 25, 1940 No. 5



Reminiscent of construction scenes of a number of years ago, United Concrete Pipe Co. crews build the precast concrete pipe line from the softening and filtration plant to the Upper Feeder of the Distribution System.

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AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

306 West Third St.
Los Angeles, California

Published monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. VII May 25, 1940 No. 5

Contracts Awarded For Pipe Lines And Tunnel

Delivery of filtered and softened Colorado River water to four District cities was brought a step closer on May 17 when the Board of Directors of the Metropolitan Water District awarded contracts for the construction of 6.8 miles of pipe lines and a 0.71 mile tunnel, all of which will be links in the San Rafael-Santa Monica feeder of the Distribution System.

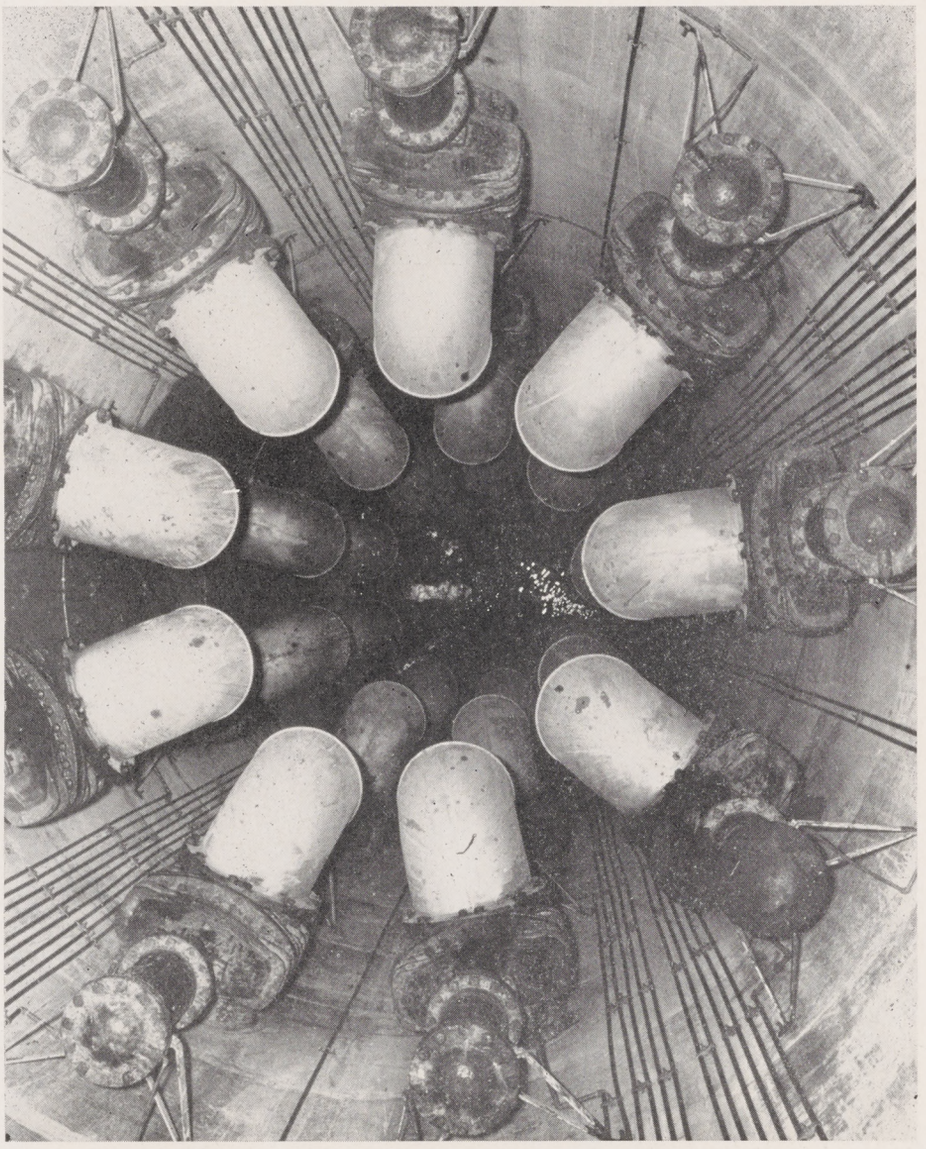
Divided into two schedules, the pipe line work is an extension of the Upper Feeder now completed to the west portal of San Rafael Tunnel No. 2. The new construction work will run through the City of Glendale to a point inside the easterly city limits of Burbank.

Schedule 29P, consisting of 2.5 miles of 58-in. diameter lock-joint steel cylinder reinforced precast concrete pipe, will be built between the west portal of San Rafael Tunnel No. 2 and Verdugo Wash in Glendale. A contract for the construction of this schedule was awarded to the American Concrete and Steel Pipe Co. at its bid price of $296,780. The M.W.D. will furnish cement, and lock joints, rings, and gaskets used in this type of construction.

At the same time a contract was awarded to the J. F. Shea Co., Inc., at its bid price of $495,400, for the construction of Schedule 30SC. This schedule consists of 4.3 miles of 59-in. diameter welded steel pipe with gunite exterior coating and a spun cement mortar lining. This pipe, to be placed between Verdugo Wash in Glendale and a point on Kenneth Road inside the city limits of Burbank, will be similar in construction to the pipe placed in the Palos Verdes Feeder of the Distribution System.

To be constructed through the Hollywood Hills in an area west of Cahuenga

(*Continued on Page* 4.)



This picture, which appears the same any way you look at it, shows the inside of the Cajalco Outlet tower from the top down. The series of valves allow water to be taken into the tower from various levels of the reservoir.

– DIRECTORY –

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Franklin Thomas, Vice-Chairman
S. H. Finley, Secretary

Anaheim.....E. P. Hapgood
Beverly Hills....Arthur Taylor
Burbank....James L. Norwood
Compton....Warren W. Butler
Fullerton..Walter Humphreys
Glendale.....Herman Nelson
Long Beach....William M. Cook
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Los Angeles.....Otto J. Emme
Los Angeles.....
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Asst. Controller, G. D. Smith
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Secy. to Gen. Mgr.....
.....Elisabeth von Hagen

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Distribution.....R. B. Diemer
Transmission....Robt. N. Allen
Maintenance.....W. J. Neale
Field. Supt. Pumping.....
.....T. T. Walsh

SUPERINTENDENTS
(Main Aqueduct Tunnels)
San Jacinto Tunnel, District Force Acct., B. C. Leadbetter, Gen. Supt.

Softening and Filtration Plant
Griffith Company. Weymouth Crowell Co., Project Manager, Olen Evans, Field Supt.

Waste Water Disposal Line
United Concrete Pipe Corporation.

Schedule 29P
American Concrete & Steel Pipe Co.

Schedule 30SC
J. F. Shea Co., Inc.

Hollywood Tunnel
J. F. Shea Co., Inc.

Terminal Reservoir To Be Dedicated As Lake Mathews

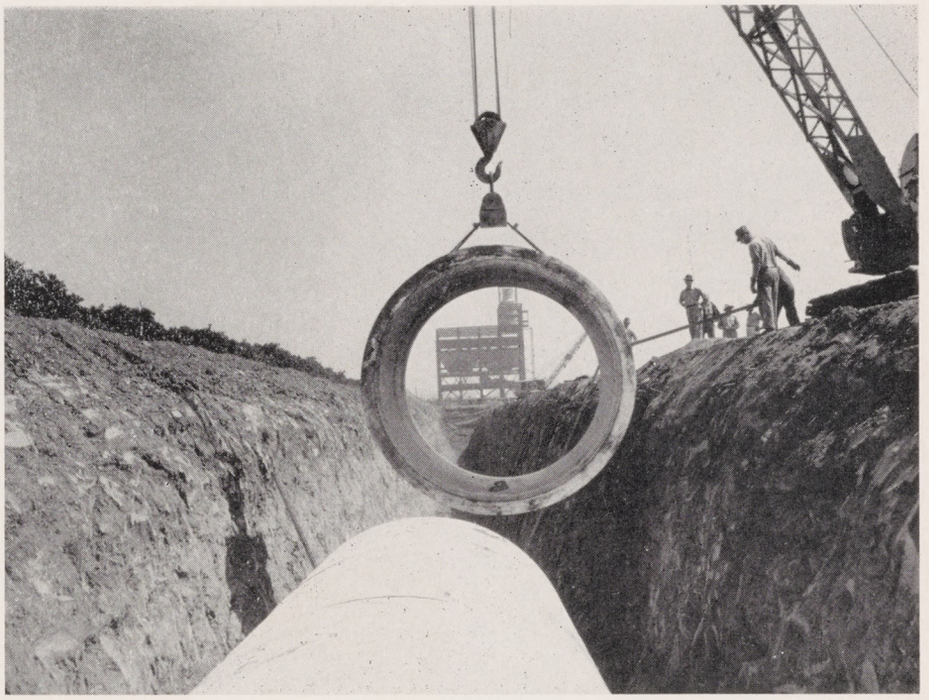
In accordance with the unanimous action of the District's Board of Directors. The former Cajalco Reservoir has been named in honor of the late W. B. Mathews who was the first General Counsel for The Metropolitan Water District of Southern California.

The motion to adopt the name of Lake Mathews for the aqueduct's terminal reservoir was presented by Director Otto J. Emme of Los Angeles and was seconded by Board Chairman W. P. Whitsett.

In recommending that this body of water be renamed, Victor H. Rossetti, Director from Los Angeles and Chairman of the Board's Public Relations Committee, stated:

"All persons familiar with the history of the development of the lower Colorado River are familiar with the vitally important services rendered in this connection by W. B. Mathews.

"Mr. Mathews died December 9, 1931. At the time of his death he was General Counsel for the District. He was born in Ohio in 1865, was educated in Kentucky and New York. He took up residence in Southern California in 1889.



Down she goes. Lowering a 11-ft. 8-in. diameter section of precast concrete pipe into the trench where it will become part of the line connecting the softening and filtration plant with the Distribution System Upper Feeder.

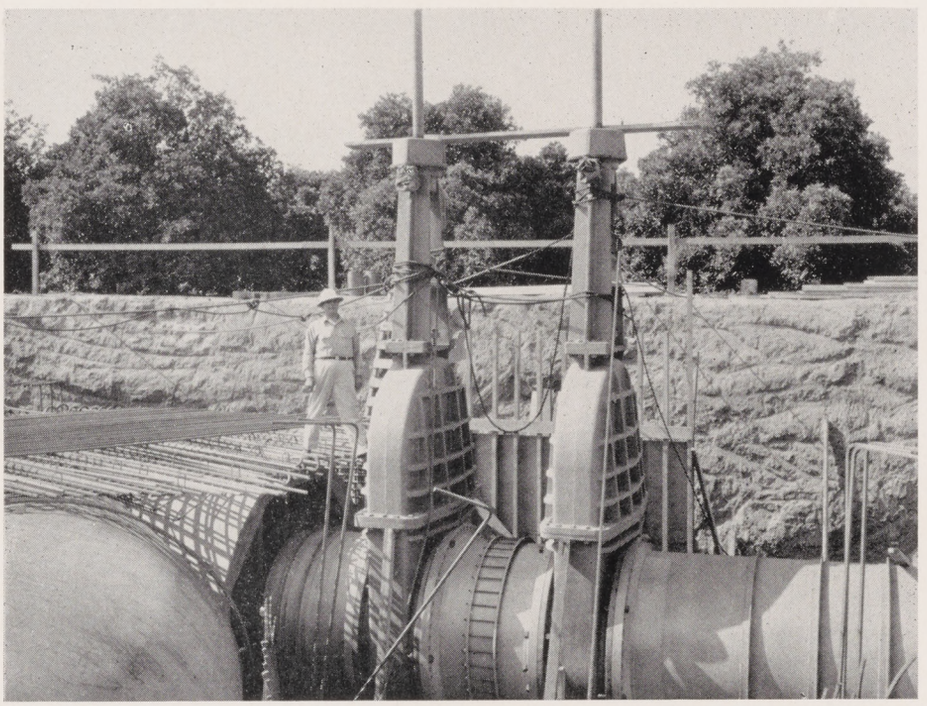
"In public life he served as City Attorney of Los Angeles, as Special Counsel for the Department of Water and Power for the City of Los Angeles, and as General Counsel for the Metropolitan Water District. In 1902 he drafted the Charter Amendments that provided for the Los Angeles municipal water and electric systems.

"He was a leader among the first small group of men from the Southwest who advocated the construction of a high dam at Boulder or Black canyon on the Colorado River. In consultation with Senator Hiram Johnson and Representative Phil Swing, he drafted a large part of the Boulder Canyon Project Act.

"Recognizing the urgent need of Southern California cities for Colorado River water, he drafted the Metropolitan Water District Act, which made legally possible the formation of The Metropolitan Water District of Southern California.

"Many of those who are intimately familiar with the history of the long struggle to secure Boulder Dam and other national legislation pertaining to the development of the lower Colorado River are firmly convinced that, more than any other contributing factor, it was the legislative genius and self-effacing leadership of W. B. Mathews that made possible this long step forward in the control and conservation of one of the nation's greatest natural resources."

Present plans call for a formal dedication sometime this summer of the reservoir to be called Lake Mathews and the dam to be named Mathews Dam.



Exterior of the two big gate valves which will control the diversion or by-passing of water from the Upper Feeder to the water softening and filtration plant. They are located in the turnout structure which serves the plant, and which will also divert water to Orange County cities.

MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in May, covering work done in April.)

Legal Division

All necessary documents to secure payment for Interim Certificate No. 98 in the denomination of $756,000, representing bonds heretofore sold to the R.F.C., were prepared. Payment for said certificate was made April 25, 1940.

Miscellaneous Activities Division

During the month of April, 1940, 61 labor employment applicants were cleared as eligible for work on the aqueduct. Of this number, 5 were made available for force account work, and 56 were made available for aqueduct contractors. A total of 523 persons was interviewed during the month.

Main Aqueduct

Salvage Division—Stock appraised and transferred to the Banning salvage yard during April amounted to $36,006.22, making a total to date of $2,332,702.24. Sales during April amounted to $64,-182.56 and transfers to other District features to $3,006.97. Total disbursements to date amount to $1,321,053.41.

Parker Dam—Flow through the gates during April averaged 10,380 cubic feet per second. Construction on the Parker power plant was in progress throughout the month.

Civil Engineering Division

Design — Specification drawings of pipe sections and structures for the Glendale-Burbank feeder, and for the Hollywood tunnel on the Burbank-Santa Monica feeder were completed. Work was in progress on specification drawings of structures on the Burbank-Santa Monica feeder, and in connection with the necessary Ventura meters and large valves required for sectionalizing and control of flow in the new feeder lines.

Specifications—Seven sets of specifications were completed, including those for pipe lines in Glendale and Burbank and for the Hollywood tunnel.

Materials and Inspection—Deliveries of District furnished materials included 5600 barrels of cement shipped to the water softening and filtration plant. At the Banning laboratory tests were made on fiber conduit, coal-tar enamels, and coal-tar primers, for use at the water softening plant, and acceptance tests were made on 5000 barrels of cement.

Distribution Division

Field and Office Engineering—Minor revisions in alignment of the Orange County feeder to improve the location from the standpoint of affected property owners, and drilling of test holes along this line were completed. Surveys were in progress on the Glendale - Santa Monica feeder, and the final location of the line from San Rafael tunnel to Burbank was staked in the field. In the office, plan-profile drawings for the Orange County feeder were in preparation, those for the portion of the line in Anaheim and Fullerton being completed. Plan-profile drawings on the Santa Monica feeder are practically completed as far as the north portal of the Hollywood tunnel, and drawings for this tunnel were completed.

Contract Work—Lines and grades were established and inspection was provided for all construction operations at the water softening and filtration plant. Many visitors were shown about the area and the work explained to them. Good progress was made by the contractor and subcontractors on the various features of the plant itself, on the influent and effluent pipe lines, and on the water tank.

Electrical Engineering Division

Pumping Plants—The pumping plants were operated intermittently to test all parts of the equipment and to furnish water for testing and conditioning the aqueduct structures and reservoirs. A total of 10,760,200 kilowatthours of energy was used, and 7,956 acre feet of water were pumped from Lake Havasu. Beginning on April 1, plant operation was on a single-shift basis at Iron Mountain, Eagle Mountain, and Hayfield plants. Intake and Gene plants were operated alternately by the same crew on a three-shift basis. Pumping is discontinued on alternate week-ends.

Purchasing Division

A total of 365 purchase orders was issued, covering purchases amounting to approximately $12,000. Carload forwardings totaled 14.

Accounting and Costkeeping

The total cost of the work accomplished to April 30, 1940, was $183,-389,629.15.

Contracts Awarded For Construction

(*Continued from Page 2.*)

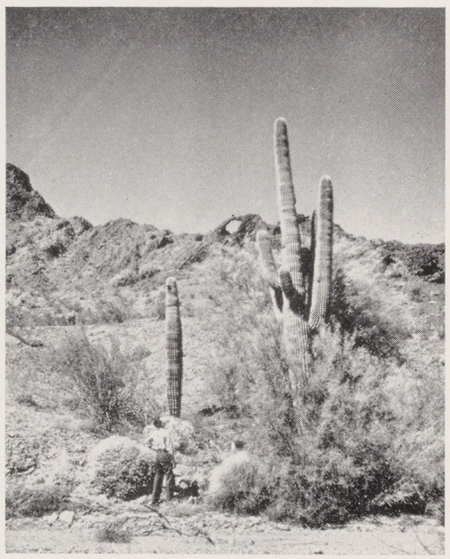
Pass and north of Hollywood Blvd., the Hollywood tunnel will have a length of 0.71 mile and will have an inside lined diameter of six feet. A contract for the construction of this tunnel, which will be No. 43 on the aqueduct system, was awarded to the J. F. Shea Co., Inc., based on its bid of $146,922.

Five bids were received by the District for the construction of Schedules 29 and 30, and a total of ten bids was received for the construction of the Hollywood tunnel. Both of the successful bidders have had aqueduct construction contracts in the past.

Construction of the tunnel, which will be driven from both the north and south portals, is expected to be started by June 1, and work on the pipe line schedules will probably be under way shortly thereafter.

Reports from the office of Distribution Engineer R. B. Diemer indicate bids will be advertised for about June 1 for the construction of the remaining links in the Santa Monica feeder, with bids to be opened about June 25. When completed, this line will serve the District cities of Glendale, Burbank, Beverly Hills, and Santa Monica.

It is also planned to call for bids on the Orange County feeder within the next few weeks. Present plans call for the opening of bids on this line about July 10. This line will serve the cities of Fullerton, Anaheim, and Santa Ana.



Giant Saguaro cactus in the vicinity of the Copper Basin Reservoir. Some of these plants are believed to be hundreds of years old. Note the natural rock arch in the background.

Board Receives More Requests For Annexation

Evidencing the increasing desire on the part of various communities and areas, particularly in the vicinity of the south coast of Orange County, to obtain Colorado River Aqueduct water, the Board of Directors of the District has recently received a number of requests for permission for such areas to annex to the District and additional requests for information relative to the possibility of such annexations.

Within the last few weeks the Board has received requests for permission to annex from the Fairview Farms Water Company, the Newport Heights Irrigation District, and the Newport Mesa Irrigation District. All of these districts at the present time serve areas in the vicinity of Costa Mesa and Newport-Balboa Bay.

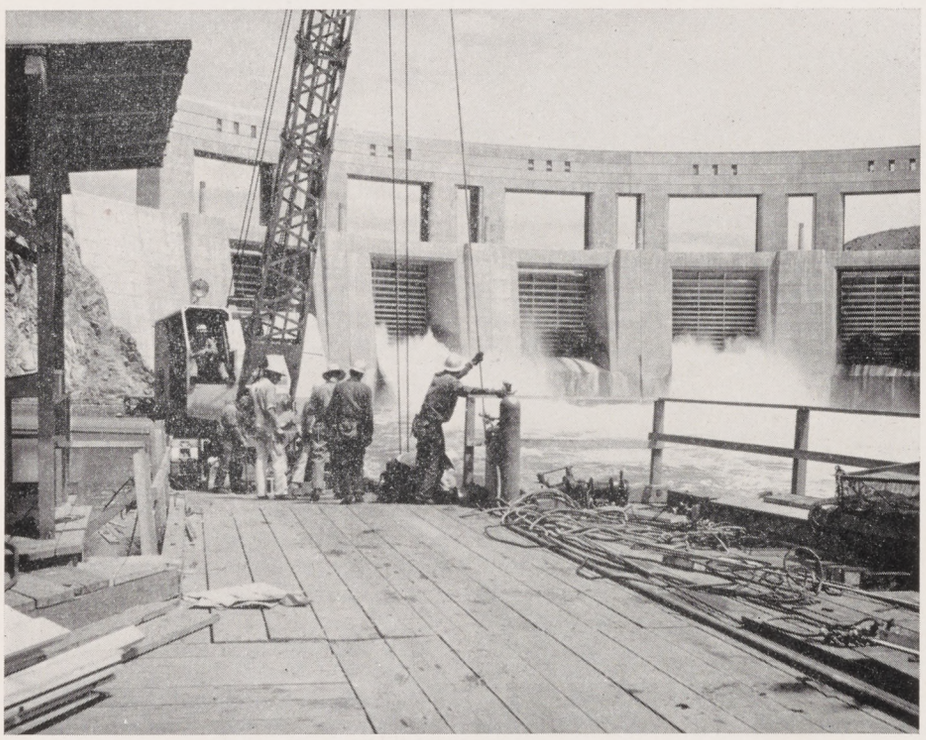
Information contained in the letters from each of these areas indicates that the water level in their wells has been steadily lowering for the past twenty years, that there is no place where a proper additional supply of water can be developed, and that annexation to the Metropolitan Water District offers the only solution to the problem of securing an adequate future water supply.

A battery of wagon drills at work prior to blasting operations in connection with the construction of the Parker Dam power house. Some idea of the amount of blasing may be gained by noting the large number of empty power boxes in the vicinity.

It is understood that water users in Orange County in the vicinity of Brea and La Habra are also giving serious consideration to the possibility of annexation to M.W.D.

At the present time, the District's Board of Directors also is studying requests for annexation which have been received from the Laguna Beach County Water District (which includes the City of Laguna Beach) and the South Coast Water District.

Acting on the request of the South Coast and Laguna County water districts, the M.W.D. Board voted on May 17 to allow these groups to have unofficial representatives attend all regular meetings of the M.W.D. Board.



Equipment at work below Parker Dam in connection with dewatering operations behind the power house foundation. The outer wall of this foundation was built at the time the dam itself was constructed.

CABAZON AND LAWRENCE HOISTS SOLD FOR USE IN NORTHERN CALIFORNIA

Hardrockers and visitors who rode up and down the Cabazon shaft and the Lawrence adit during the construction of the San Jacinto tunnel will be interested to know that the hoists which hauled them have been sold, and that after having done their job to help provide "white gold" for Southern California they are now going to help produce yellow gold in the northern part of the state. The two hoists, including their motors and all electrical controls were recently sold by the District to the Idaho Maryland Mines Co. and will be installed at gold mine shafts in Grass Valley, California. Fourteen trucks and trailers were required to move the equipment from the tunnel job.

Employment Offered For Qualified Men In Canal Zone

Information of interest to aqueduckers and ex-aqueduckers is contained in a recent note from Arthur Volbrecht. "Art" Volbrecht will be remembered by many of the aqueduct clan due to his long service in the District Employment Office, both as a District employee and as a representative of the aqueduct contractors. His letter states:

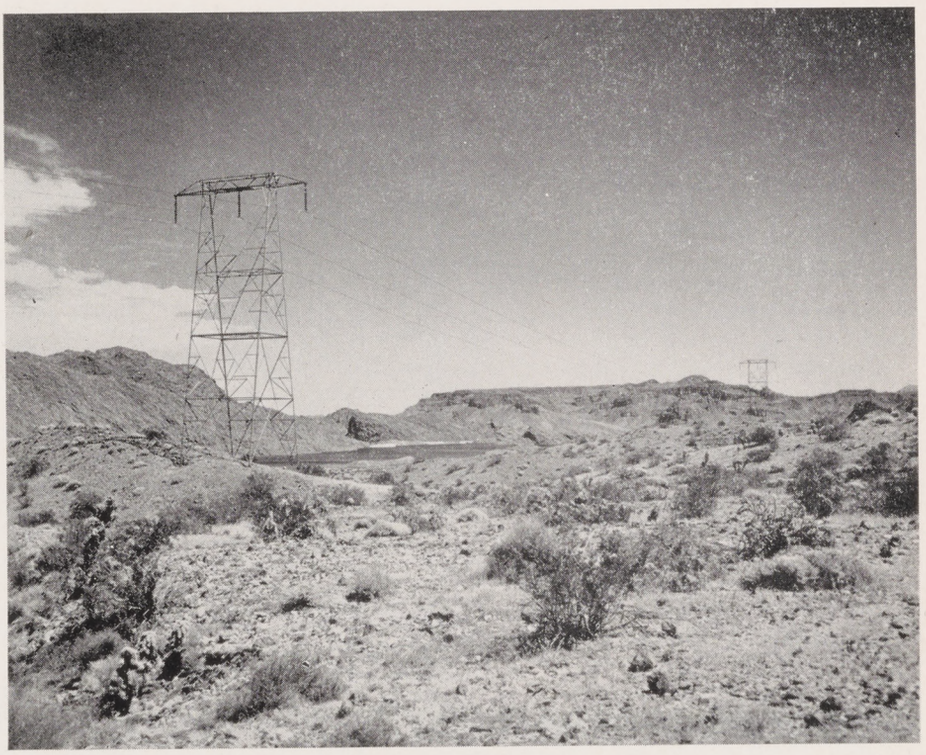
"The California Department of Employment, through its office located at 6906-10 Pacific Blvd., Huntington Park, is anxious to secure qualified workers for the Panama Canal Zone.

"Qualified applicants only are wanted. Any applicant whose qualifications do not comply in every respect with properly detailed experience, education, apprenticeship, age limit, full name and address, etc., will not be accepted.

"Some of the positions to be filled are:

"Draftsmen—civil, topographical, electrical, mechanical, and structural. Salaries up to $240 per month.

"Engineers—electrical, hydraulic, marine, mechanical, structural (masonry design and steel structures). Salaries up to $480 per month.



The District's transmission line from Boulder Dam passes near Gene Reservoir enroute to the Gene Pumping Plant.

"Designers—electrical and mechanical. Salaries up to $270.

"Inspectors—reinforced seel. Salaries, $270 per month.

"Skilled trades—railroad carmen, coppersmiths, drivers, machinists (auto and marine), shipfitters, riveters, boilermakers.

General Requirements

"No applicant should be over 45 years old. Must be an American citizen, and if naturalized must be in possession of final papers. All cards referred must, on the reverse side, contain a statement by the applicant to the effect that he has never been convicted of a felony.

"Transportation to the Panama Canal Zone will be paid from the following points, whichever may be the most convenient for the applicant: New York, New Orleans, or San Francisco. Applicants will not be able to take their families along at this time. Bachelor quarters are provided at approximately $9.00 per month.

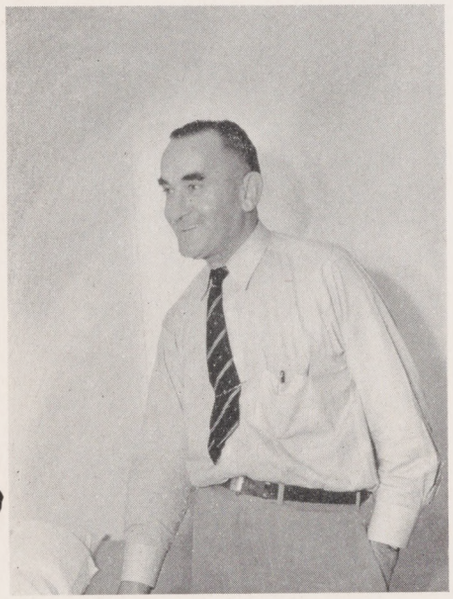
"Food costs are similar to those paid in metropolitan areas in the United States. A rigid physical examination is required. Forty-four days vacation with pay allowed each year. Forty-hour week. Employment will last from one to two years; possibility of permanency unless otherwise noted.

"Applications will be accepted in the Huntington Park, or other offices of the California Employment Department."

Arthur Volbrecht is now Assistant Manager of the Huntington Park office of the California Employment Department.

Judging by this early morning catch, Lake Havasu is justifying its name of Southern California's newest "fisherman's paradise". The Intake Pumping Plant is seen in the background.

NEWS FROM FIELD AND OFFICE



Gene Falkenburg, Assistant Superintendent of Pumping Plants. Gene, who is an old-timer in the Electrical Division, started his career with the District at Berdoo in 1933.

The District has recently published a booklet on the water softening and filtration plant which contains a number of drawings of the plant, a general description of the operation of the plant, and a map showing the location of the plant in relation to the entire aqueduct system. Copies of this booklet may be obtained by contacting the District at its Los Angeles headquarters, 306 W. 3rd Street.

* * *

George Archibald(how many people ever knew that his first name was George) is now employed by the Southern California Edison Co. "Archy" was one of the well known old-timers on the job, having been with the District since 1931.

* * *

Word comes in that a former Banning "hello" girl, Gretchen Donnelly, is now working for the State of California in Los Angeles. Gretchen was a telephone operator in the Banning office from 1936 to 1940.

* * *

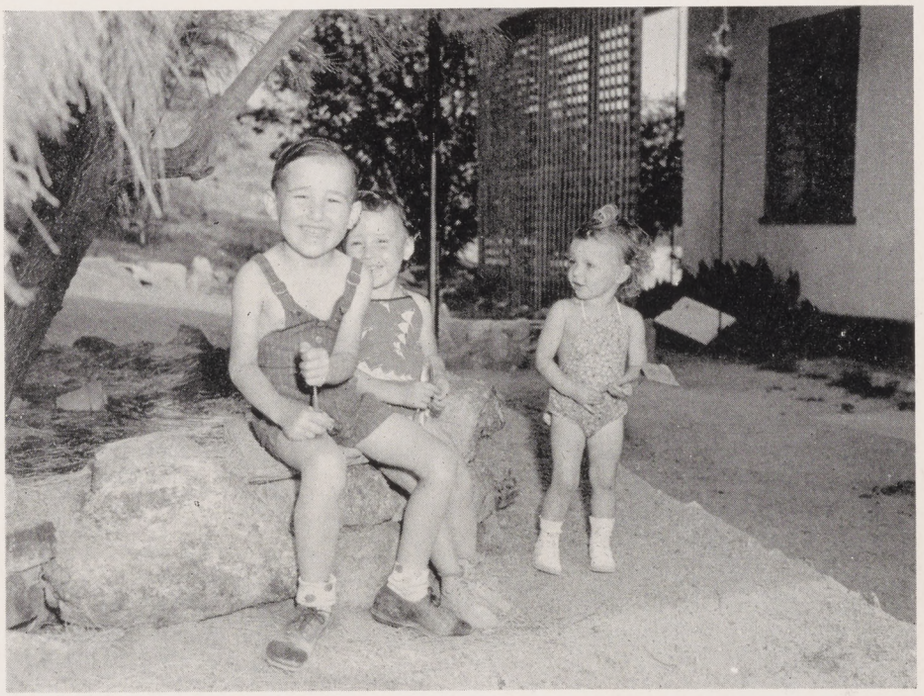
Kirby Schlegel resigned from the District to accept a position with the Government on construction work in the Panama Canal Zone. (See story on page 6). Kirby, who has managed to stay a bachelor, started to work for the M.W.D. as a chainman on Division 6 in 1933.

Aqueduct Temperatures
April 16 to May 15, 1940

	Max.	Min.
Gene Pumping Plant	108°	52°
Iron Mt. Pumping Plant	104°	53°
Eagle Mt. Pumping Plant	104°	52°
Banning	96°	37°
Cajalco	97°	45°

Supposedly, to be forewarned is to be forearmed. Therefore, the gentry of the Distribution Division, particularly those to be assigned duty in connection with the construction of the Hollywood tunnel (see story page 2) might as well expect to be accused of "monkey business" on that job. The reason for this sad state of affairs being that one portal of the tunnel will be in the very near vicinity of the well known monkey farm on Cahuenga Pass. It doesn't even take a vivid imagination to visualize what may be accomplished in excavating the tunnel in case the monkeys ever get into the hole. It is further expected that any "busts" in line or grade (perish the thought) will be promptly blamed on monkey business. When all of this is added to the fact that the tunnel will also be located in the near vicinity of Hollywood Blvd.—the possibilities are "COLOSSAL". Watch this space for the first picture of the Distribution Engineer making an inspection trip in the tunnel carrying a monkey on his arm and, instead of a hard hat, wearing a sky-blue beret.

Bill Burkhart, who spends part of his time working on the flowers and plants that have made the Iron Mountain plant one of the beauty spots of the desert.



This trio of young aqueduckers make their headquarters at the Iron Mountain Pumping Plant. From left to right: Jimmy and Patsy Rowe, and Laura Rae Lamm. The proud papas, James Rowe and Bernard Lamm, are members of the main aqueduct maintenance crew, and both have been on the job since the early construction days.

New Type of Equipment In Use At Water Plant

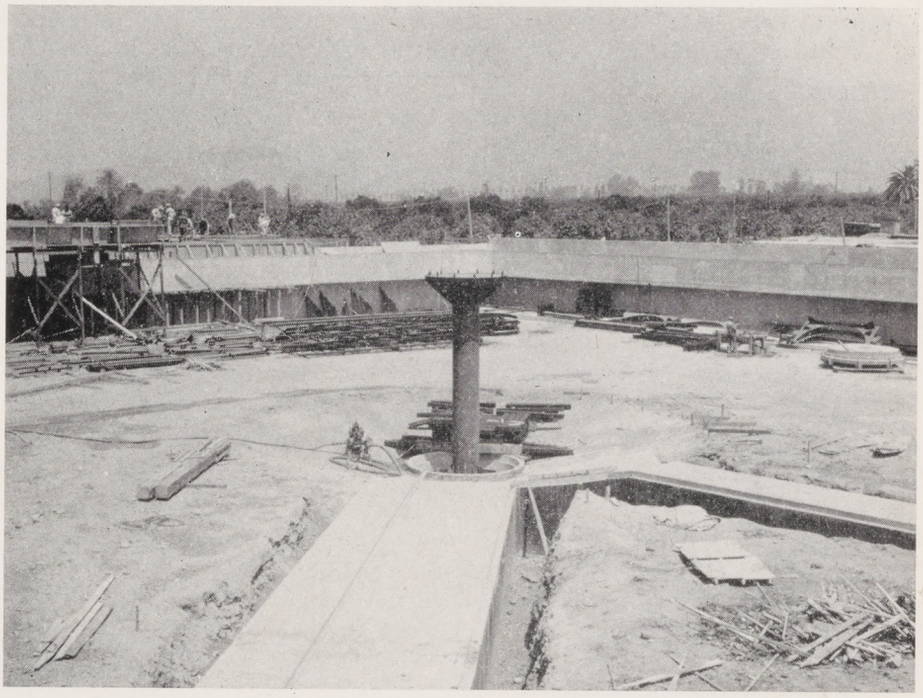
One of the most interesting of the many pieces of equipment being used in connection with the construction of the water softening and filtration plant is the mechanical concrete troweling machine illustrated in the picture at the bottom of this page.

The machine is being used for troweling the smooth finish for all floor surfaces in the big plant. Owner, operator, and developer of the machine is J. S. Spencer who has worked at the concrete finishing trade for the past twenty-seven years. He has spent three years in developing the machine now being used at the water plant.

The machine consists of three specially made crucible steel trowels mounted on a shaft which rotates at 100 r.p.m. The shaft is powered by an electrically driven 2½ horsepower Kelly floating machine which weighs 300 pounds.

One of the principal advantages of the new machine is that it exerts a much higher pressure in troweling than can be applied by hand. This permits the use of a drier concrete mixture for surface work making possible a tougher and more homogeneous finish.

Because of the speed with which it works the machine can cover large areas in a short time and thus allows the hardening concrete to be troweled at just the right time to obtain the desired finish. The trowels on the machine are turned up on the edges to prevent them from digging into the fresh concrete.



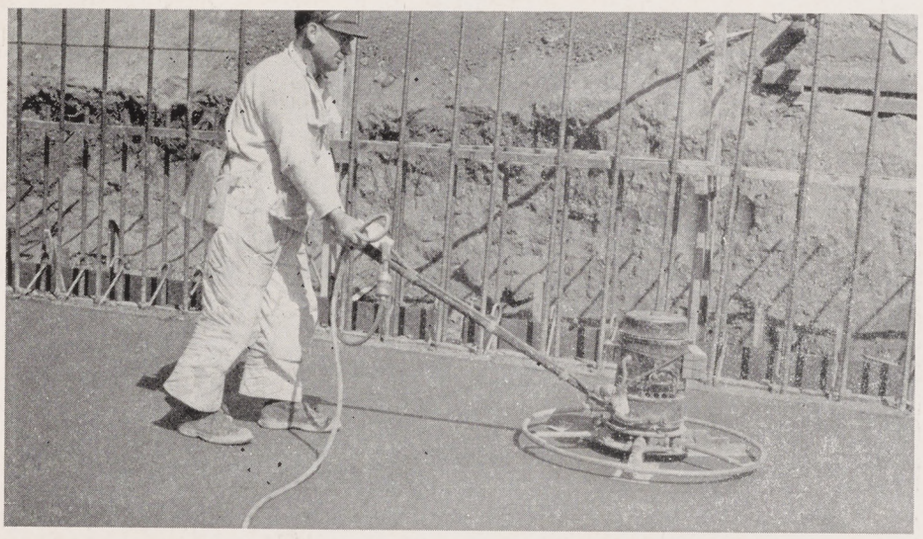
A view of the north settling basin at the softening and filtration plant with the pedestal in the center on which the clarifier will revolve.

Progress reports from the plant indicate that all construction work is right on schedule and that the entire job is about 40 per cent completed at the present time. The District recently awarded a contract to the Lacy Manufacturing Company for furnishing lime weighing, feeding, and slaking equipment to be used at the plant. The equipment is to be furnished in accordance with Specifications No. 327, and the total amount of the contract was $14,202.67.

With a major part of the excavation completed, all structural steel placed in the head house, and foundation concrete placed, the plant is now beginning to take on such an appearance that the poor innocent visitor (with the aid of a competent guide, an armful of drawings, and a chemistry handbook) can begin to get a vague idea of where the water goes in and where it comes out. The question of the middle valve, where it is, or who pushes it down, however, still requires a vivid imagination.

The two settling basins for the first development of the plant are rapidly taking shape and the mechanism for the clarifiers is being assembled. It is foreseen that a lot of small boys (ages 6 to 60) are going to want to ride on these merry-go-rounds when they are placed in operation.

Also becoming visible out of the maze of piping and reinforcing steel are the sand filters, zeolite beds, and mixing channels, and, as shown by the picture on the cover of the NEWS, rapid progress is being made on placing the lines connecting the plant with the Upper Feeder. These lines (providing you know what "influent" and "effluent" mean) are features whose purpose can be understood by even the NEWS reporter.



J. S. Spencer demonstrates the mechanical troweling machine being used for finishing floor surfaces at the softening and filtration plant.

After a thorough and complete check of the main aqueduct, transmission lines, and pumping plants, field forces reported to General Manager Weymouth that there had been absolutely no damage to the aqueduct system as a result of the Imperial Valley earthquake on May 18.